

NEW SPECIES AND GENERA OF NORTH AMERICAN
LEPIDOPTERA.

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(Continued from page 93.)

Subfamily *Hypeninae*.*Epizeuxis terrebralis*, sp. nov.

♂.—Antennæ rather lengthily ciliate; palpi upturned, 2nd joint smoothly scaled, attaining to front, 3rd joint long, narrow, pointed; thorax and primaries deep black-brown with indistinct maculation; t. a. line single, wavy, black, inclined slightly outwardly with rather prominent outcurve in submedian fold; reniform an indistinct dark lunular mark, very faintly and only partially outlined in ochreous; from it a faint wavy shade proceeds to inner margin parallel to t. p. line; this latter most distinct of the maculation, slightly outcurved around cell and then parallel to outer margin, slightly wavy with faint inward angle on submedian fold; s. t. line only traceable in costal portion, faint, black; black terminal line and dusky fringes; secondaries dark smoky with broken terminal line. Beneath uniform dark smoky with darker terminal line and small discal spot on secondaries. Expanse, 23 mm.

Habitat: White Mts., Ariz., 1 ♂. Type, collection Barnes.

Smaller and darker than *suffusalis* Sm.; t. p. line less wavy and without the ochreous blotch in reniform.

Bleptina flaviguttalis, sp. nov.

Palpi ochreous; head and thorax pale purplish gray sprinkled with black scales; primaries purple-gray, shaded outwardly with darker and with the remaining area thinly sprinkled with black scales; basal line an indistinct dark upright shade line across the whole area of wing; subbasal area very slightly shaded with ochreous; t. a. line single, black, upright, very slightly bent inwards at costa; orbicular a pale yellow dot, indistinctly outlined with brownish; reniform yellow, triangular, with apex produced towards costa, lower portion containing a black dot; a dark median shade line, indistinct in costal half, wavy below reniform and equidistant from t. a. and t. p. lines; t. p. line black, crenulate, concave below costa, again opposite reniform, outcurved between veins 3-5, incurved between veins 1-3, slight outward angle on vein 1; s. t. line pale yellow, even, outcurved between veins 3-5, otherwise straight, shaded

anteriorly with dark brown ; a terminal row of black dots ; fringes dusky cut by a waved indistinct black line ; secondaries deep smoky with faint pale subterminal line only distinct near anal angle. Beneath pale smoky shading into dark brown outwardly ; a discal dot and faint dark median line on both wings and pale subterminal line, most distinct on secondaries ; fringes dusky. Expanse, 24 mm.

Habitat : Palmerlee, Ariz., 1 ♂. Type, collection Barnes.

A typical *Bleptina*, most closely related to a Texan species which we have identified as *inferior* Grt. In our species the t. a. line is straighter, the lower portion of the reniform larger and the subterminal line of secondaries is distinct at least in the anal half of wing.

Bleptina minimalis, sp. nov.

Palpi recurved, third joint long, very pointed, with slight tuft of scales on posterior side in both sexes ; antennæ finely ciliate ; general colour pale ochreous to dark gray, primaries often considerably shaded with black scales ; maculation varying in distinctness, often almost lacking, in other cases quite distinct ; when present, basal line a slight dark streak very close to base ; t. a. line single, dark, slightly waved, most prominent below orbicular ; this latter spot just beyond t. a. line, longitudinally oval, yellow, small, obscurely outlined in brownish ; reniform yellow, constricted medially, lower portion broader than upper and containing a blackish dot, the whole partially outlined in dusky ; at times the whole reniform is much reduced, becoming a mere yellow streak ; occasionally traces of a faint dusky median shade, usually however lacking ; t. p. line dark, crenulate, shaded outwardly with paler, excurved from just below costa around the reniform, with strong incurve in submedian fold ; s. t. line pale, shaded more or less strongly on both sides with dusky, slightly wavy, excurved in central portion ; a terminal series of dark dots ; secondaries smoky brown, occasionally with traces of a crenulate dark median line and pale subterminal one, mostly however immaculate. Beneath uniform smoky, lighter in basal area of secondaries in the paler forms, which also show traces of the lines of upper side. Expanse, 14 mm.

Habitat : Babaquivera Mts., Ariz. ; Redington, Ariz., 2 ♂s, 6 ♀s. Types, collection Barnes.

The small size will readily distinguish this species. In general the ♀s are darker and more obscurely marked than the ♂s. Fresh specimens also appear considerably darker than those that have been in the cabinet some time.

Family *Notodontidæ*.

Hyperæschra stragula, var. *ochreata*, var. nov.

♀.—Primaries pale ochreous brown, maculation as in *stragula*; on costa between basal and t. a. lines a bar of blue-black extending downwards to first brown dash in cell and somewhat sprinkled with whitish; just beyond the discal lunule a large blue-black patch, rather irregularly circular, resting on costa, defined outwardly by the t. p. line, basally by vein 3; this contains two whitish patches, one between veins 4 and 5, the other smaller between veins 6 and 7, and opposite the discal lunule it is indented with white; costal area between it and t. a. line whitish, containing the reddish-ochre discal mark; terminal area blue-black; basal half of inner margin broadly blue-black crossed by the pale curved t. a. line. Secondaries white; fringes shaded with blue-black at inner angle. Expanse, 46 mm.

Habitat: Provo, Ut. (July 21st), 1 ♂. Type, collection Barnes.

The large circular black mark beyond cell is very characteristic, the ground colour is paler than in *stragula* and the s. t. line much less waved. May prove to be a distinct species on receipt of more material.

Family *Thyatiridæ*.

Habrosyne rectangula, var. *arizonensis*, var. nov.

Ground colour of primaries and thorax mouse-gray with none of the brownish shading characteristic of *rectangula*; white dash at base of wing reduced in size; pinkish-white costal and subterminal shading somewhat reduced; secondaries similar to ground-colour of primaries, not brownish as in the type form.

Habitat: White Mts., Ariz., 1 ♂. Type, collection Barnes.

Family *Geometridæ*.

Genus *Grossbeckia*, gen. nov. (type *G. semimaculata*, sp. nov.).

Antennæ of ♂ shortly bipectinate; palpi long, drooping, pointed at extremity, smoothly scaled; fore legs with the femur slightly hollowed out distally to receive the tibia which is $\frac{1}{2}$ the length of the femur and possesses a slight hair pencil beneath, concealing the epiphysis; posterior

tibiæ normal, spurred, outer spur about half as long as the inner; wings long, narrow, primaries with slightly convex costal margin, well rounded apex and rather oblique outer margin; inner margin straight; secondaries slightly crenulate with sharp angle at junction of inner and outer margins; primaries with vein R_1 from about middle of cell; areole long, narrow, exceeding the cell by about half its own length; R_2 , R_3 and R_4 stalked from apex of areole; R_5 from a point with R_2 ; M_1 from lower angle of areole; M_2 from centre of discocellular; M_3 and Cu_1 from lower angle of cell; Cu_2 from near angle; anal vein parallel to inner margin; secondaries with vein M_2 absent, vein S. C. joined to the cell for about $\frac{2}{3}$ of its length; veins R and M_1 stalked; M_3 and Cu_1 connate from lower angle of cell; Cu_2 from near angle; 2nd anal very close to inner margin; frenulum present.

The genus is remarkable in lacking vein M_2 of secondaries and having the subcostal vein distinctly united with the cell, which would place it in the family *Fernaldellinæ* of Hulst. The type species possesses very little resemblance to specimens of the genus *Fernaldella* and is in fact very distinctly *Hydriomenid* in general appearance. We take pleasure in naming the genus after our friend Mr. J. A. Grossbeck.

Grossbeckia semimaculata, sp. nov.

Palpi, thorax and abdomen dark gray, latter pale ochreous beneath; primaries with the costal half of wing alone showing maculation; below cubital vein, with the exception of the inner margin, the whole area is dull gray-brown; costal half of primaries brown, suffused with light and dark gray; a slight black streak at base of wing; from costa near base an obscure dark shade extends obliquely across wing to cubital vein, bordered outwardly slightly with gray; at apex of cell a large white quadrate patch; costal area above this patch largely dark smoky-brown with several pale gray streaks, beyond the patch the brown ground colour forms a small round blotch; from apex of wing inwards nearly to white patch a diffuse gray shade extends, bordered inferiorly by a slightly notched dark line ending in a dark shade, from which two curved dark lines, parallel to outer margin, arise, extending to vein Cu_2 and enclosing a dark gray blotch; terminal area shaded with dark gray; cubital and median veins marked with black; a black shade, broken twice by gray scaling, extends narrowly along the inner margin; secondaries rather pale smoky, fringes

somewhat lighter. Beneath primaries uniform pale glossy brown ; secondaries whitish, shaded with brown along outer margin. Expanse, 31 mm.

Habitat: Palmerlee, Ariz., 1 ♂. Type, collection Barnes.

Bears considerable resemblance to *Cataclothis frondaria* Grt., but the pale immaculate area is much larger and the venation totally different. This pale area is due to the fact that when at rest the wings are so folded that only the costal half of wing is visible, the insect then having much the appearance of a Phycitid.

Diastictis (Cymatophora) pallipennata, sp. nov.

♂.—Palpi, head, thorax, and abdomen white ; ground colour of primaries white, marbled with gray, which shade is predominant beyond the t. p. line ; t. a. line single, rather broad, especially at costa, dark gray, angled outwardly below costa and with slight inward angle on submedian fold ; median space more or less shaded with gray ; a small oval gray mark at end of cell, slightly filled with white ; t. p. line dark gray-brown, curved outward from costa, inward opposite cell and with a rather sharp outward angle in submedian fold, in general parallel to t. a. line ; subterminal and terminal spaces almost entirely olive-gray with the exception of a white costal patch ; through this area a broad white subterminal line runs, rather irregular in course, angled slightly outwardly below apex, the angle preceded by a short dark dash in subterminal space, another slight angle or outcurve between veins 3 and 4, termination at inner angle ; fringes white, checkered with dark gray. Secondaries white, heavily mottled with dark gray, leaving only traces of the ground colour visible ; a faint discal dot and rather heavy dark postmedian line, parallel to outer margin, with slight outcurve before inner margin ; terminal area somewhat darker ; fringes white, faintly checkered with gray. Beneath white, heavily sprinkled with gray ; primaries with discal dot and straight postmedian line ; secondaries with dark postmedian and subterminal lines and discal dot.

Male paler than ♀ ; the subterminal and terminal spaces white with but little dark gray shading ; subterminal line wanting ; from costa near apex a dark dash inward to vein 7, semiparallel to t. p. line. Antennæ bipectinate, posterior tibiæ swollen but without hair pencil. Expanse, 19-22 mm.

Habitat: Redington, Ariz., 1 ♂, 4 ♀s. Types, collection Barnes.

The species has considerable resemblance with *Macaria s-signata* in general type of maculation. The extent of the dark olive-gray shading

is variable, the median area is in some specimens pure white, in others quite smoky ; the discal mark may be present or absent.

Phycitiinæ.

Euzophera strigalis, sp. nov.

Palpi upturned, 3rd joint moderate, pointed, smoothly scaled with whitish ; pectus and legs pale gray ; antennæ of ♂ lamellate and ciliate ; front gray ; thorax and primaries dark gray, sprinkled with lighter ; primaries with the basal area and central area at end of cell slightly less sprinkled than remainder of wing ; all maculation wanting, except that the veins are prominently outlined in black, giving a strigate appearance to the wing. Secondaries, hyaline, with white fringes, slightly smoky at apex of wing. Beneath primaries smoky ; secondaries as above, costal margin sprinkled with dark scales. Expanse, 42 mm.

Habitat : Eureka, Ut., 1 ♂. Type, collection Barnes.

Related to *E. gigantella* Rag., but lacks all traces of the transverse lines.

BOOK NOTICE.

INSECTS OF FARM, GARDEN AND ORCHARD.

"INSECT PESTS OF FARM, GARDEN AND ORCHARD," by E. Dwight Sanderson. Publ. John Wiley & Sons, 43 East 19th Street, New York ; also The Renouf Publishing Company, 25 McGill College Ave., Montreal. XII, 684 pp., 513 figs. \$3.00.

The increasing number of workers in economic entomology and the consequent enormous output of literature embodying the results of their, or other people's, investigations is rendering it gradually more difficult for the student, farmer or fruit-grower to gain a knowledge of the life-histories of and means of controlling the insects with which they have to deal. Any means whereby this difficulty can be lessened is an addition to the insect-fighting organization as a whole, and its welcome is proportionate to its efficiency. We give a whole-hearted welcome to this last addition to our economic literature, and are glad that the author found the necessary leisure time to develop and complete a work which he is eminently fitted to carry out.

It is impossible in a review of this nature to give more than a superficial idea of the contents. In the author's words, it has been his effort "to